What is claimed is:

1. A particle size distribution measuring apparatus comprising:

a cell capable of receiving particles therein;

a light source section capable of irradiating one or more laser lights having a plurality of wavelengths to the cell;

a detector capable of measuring the intensity of a direct light passing through the cell and light scattered by said particles at respective scattering angles; and

an arithmetic processing section capable of determining the particle size distribution by using the laser light at a first wavelength for the region of the particle size having low sensitivity, and a laser light at a second wavelength in the whole range of the particle size to be measured to compensate the sensitivity of the region.

2. The apparatus of claimed 1 wherein said light source section further comprises a plurality of light sources capable of irradiating laser lights at a plurality of different wavelengths.

3. The apparatus as claimed 1 wherein said detector is capable of measuring the intensity of the direct light and light scattered by said particles at respective scattering angles irrespective of the wavelength of the laser light.

4. The apparatus of claim 1 wherein said light source is capable of irradiating laser light at plurality of wavelengths sequentially.

5. The apparatus of claim 1 further comprising a shutter capable of transmitting laser light of a selected wavelength and preventing the transmission of laser light at another wavelength.

6. The apparatus of claim 1 wherein said light source section irradiates a first laser light having a first wavelength and at least a second laser light having a second wavelength, wherein said first wavelength is at least 1.5 times larger than said second

wavelength.